PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 020453WO	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US03/36083	International filing date *(day/month/year)* 07 November 2003 (07.11.2003)	Priority date *(day/month/year)* 08 November 2002 (08.11.2002)
International Patent Classification (IPC) or national classification and IPC IPC(7): H04Q 7/20 and US Cl.: 455/456.1, 456.3, 456.5, 456.6, 404.2, 11.1; 370/315		
Applicant QUALCOM INCORPORATED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of ___ sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
02 June 2004 (02.06.2004)	29 April 2005 (29.04.2005)
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Jean A Gelin Telephone No. (571) 272-2863

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US03/36083

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed.

☒ the description:
pages 1-15 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☒ the claims:
pages 16-23, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☒ the drawings:
pages 1-9, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination(under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

☒ the description, pages NONE

☒ the claims, Nos. NONE

☒ the drawings, sheets/~~fig~~ NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*
*** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US03/36083

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims NONE	YES
	Claims 1-68	NO
Inventive Step (IS)	Claims NONE	YES
	Claims 1-68	NO
Industrial Applicability (IA)	Claims 1-68	YES
	Claims NONE	NO

2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Claims 1-68 lack novelty under PCT Article 33(2) as being anticipated by SONY INTERNATIONAL (EP 1 207 404 A1).

Regarding claim 1, SONY teaches an apparatus comprising: a repeater including a receiver and a transmitter (col. 1, lines 7-23); and a position location device for determining a location of the repeater (col. 1, lines 7-36).

Regarding claim 2, SONY teaches wherein the position location device is integrated with the repeater (col. 1, lines 7-36).

Regarding claim 3, SONY teaches wherein the position location device is coupled to the repeater (col. 1, line 36 to col. 2, line 19).

Regarding claim 4, SONY teaches wherein the position location device is coupled to the repeater by an external connection (col. 1, line 36 to col. 2, line 19).

Regarding claim 5, SONY teaches wherein the position location device is a GPS receiver (col. 1, lines 15-25).

Regarding claim 6, SONY teaches wherein the position location device is a mobile station (col. 1, lines 27-37).

Regarding claim 7, SONY teaches wherein the position location device determines the location of the repeater based on radio-location signals received by the receiver (col. 2, lines 27-35).

Regarding claim 8, SONY teaches wherein the position location device determines the location of the repeater based on radio-location signals received by the position location device (col. 2, lines 27-35).

Regarding claim 9, SONY teaches wherein the location of the repeater is used to update a base station almanac (col. 6, lines 19-45).

Regarding claim 10, SONY teaches wherein the transmitter transmits the location of the repeater (col. 4, lines 20-53).

Regarding claim 11, SONY teaches wherein the transmitter transmits the location of the repeater to an external device to update a base station almanac (col. 6, lines 19-45).

Regarding claims 12-16, SONY teaches wherein the external device is a base station, wherein the external device is connected to a base station, wherein the base station receives the location of the repeater from the repeater, wherein the base station updates a base station almanac with the location of the repeater (col. 1, line 7 to col. 2, line 35, col. 6, lines 6-45).

Regarding claim 17, SONY teaches wherein the receiver and the transmitter are also used to repeat signals (col. 7, lines 1-17).

Regarding claims 18, 22, 28, SONY teaches repeater comprising: a receiver including a position location device, wherein the position location device determines a location of the repeater based on radio-location signals received by the receiver; and a transmitter for transmitting the location of the repeater (col. 6, line 6 to col. 7, line 17).

Regarding claims 19, 23, SONY teaches wherein the receiver and the transmitter are also used to repeat signals (col. 7, lines 1-17).

Regarding claims 20, 24, SONY teaches wherein the transmitter transmits the location of the repeater to an external device to update a base station almanac (col. 6, line 19 to col. 7, line 26).

Regarding claims 20, 25, SONY teaches wherein the external device is a base station (col. 1, lines 7-36).

Regarding claim 26, SONY teaches wherein the external device is a base station controller (col. 5, lines 25-55).

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Regarding claim 27, SONY teaches wherein the transmitter transmits the location of the repeater to an external device for storage (col. 6, line 19 to col. 7, line 25).

Regarding claims 29, 61, SONY teaches repeater comprising: a receiver for receiving signals (col. 1, lines 7-23); a position location device for determining a location of the repeater based on radio-location signals received by the position location device (col. 1, line 36 to col. 2, line 19); and at least one memory device for storing the location of the repeater (col. 2, lines 27-35); a processor configured to retrieve the location of the repeater from the at least one memory device (col. 4, lines 20-53); and a transmitter for transmitting the received signals and the location of the repeater retrieved by the processor (col. 5, line 8 to col. 6, line 45).

Regarding claims 30, 31, SONY teaches wherein the location of the repeater is manually entered into the repeater, wherein the location of the repeater is entered into the repeater via another device (col. 4, lines 18 to col. 5, line 53).

Regarding claims 32, 62, SONY teaches wherein the processor retrieves the location of the repeater from the at least one rnemory device in response to a query (col. 5, lines 1-53).

Regarding claim 33, SONY teaches wherein the receiver and the transmitter are used to repeat signals (col. 7, lines 1-19).

Regarding claim 34, SONY teaches system comprising: a repeater including a position location device for determining a location of the repeater and a transmitter for transmitting the location of the repeater (col. 4, lines 17-50); and a base station for receiving the location of the repeater (col. 4, line 17 to col. 5, line 31).

Regarding claims 35, 67, 68, SONY teaches wherein the base station updates a base station almanac with the location of the repeater (col. 1, lines 7-36).

Regarding claim 36, SONY teaches wherein the base station routes the location of the repeater to another device (col. 1, line 7 to col. 2, line 53).

Regarding claim 37, SONY teaches wherein the base station queries the repeater for the location of the repeater (col. 1, lines 7-36).

Regarding claim 38, SONY teaches method for determining a location of a repeater comprising the steps of: receiving radio-location signals within the repeater (col. 1, lines 7-23); and determining the location of the repeater based on the radio-location signals received within the repeater (col. 1, line 7 to col. 2, line 35).

Regarding claim 39, SONY teaches wherein the receiving and determining steps are performed by the repeater (col. 7, lines 1-36).

Regarding claim 40, SONY teaches wherein the radio-location signals include assistance data (col. 6, lines 19-50).

Regarding claim 41, SONY teaches the step of transmitting the location of the repeater (col. 7, lines 1-53).

Regarding claim 42, SONY teaches wherein the location of the repeater is transmitted by the repeater (col. 1, lines 7-36).

Regarding claim 43, SONY teaches wherein the location of the repeater is transmitted by the repeater in response to a query (col. 7, lines 7-36).

Regarding claims 44, 63, SONY teaches wherein the location of the repeater is transmitted by the repeater during a predetermined time interval (col. 4, lines 19-57).

Regarding claims 45, 64, SONY teaches wherein the location of the repeater is transmitted by the repeater during initial initialization (col. 6, line 6 to col. 7, line 17).

Regarding claims 46, 65, SONY teaches wherein the location of the repeater is transmitted by the repeater on an automated basis (col. 1, line 7 to col. 2, line 19).

Regarding claim 47, SONY teaches wherein the location of the repeater is transmitted to a base station (col. 7, line 1-17).

Regarding claims 48, 66, SONY teaches the step of updating a base station almanac with the location of the repeater (col. 6, lines 19-46).

Regarding claim 49, SONY teaches method for determining a location of a repeater comprising the steps of: receiving radio-location signals; determining the location of the repeater based on the radio-location signals; transmitting the location of the repeater (col. 1, lines 7-36); and updating a base station almanac with the location of the repeater (col. 6, line 19 to col. 7, line 17).

Regarding claim 50, SONY teaches method for updating a location of a repeater comprising the steps of: receiving a query for the location of the repeater; determining the location of the repeater; and transmitting the location of the repeater (, col. 2, lines 7-36, col. 6, line 19 to col. 7, line 19).

Regarding claim 51, SONY teaches wherein the query is sent by a base station (col. 4, lines 20-53).

Regarding claim 52, SONY teaches wherein the location of the repeater is manually entered into the repeater (col. 3, lines 4-57).

Regarding claim 53, SONY teaches wherein the determining and transmitting steps are performed by the repeater (col. 3, lines 4-56).

Regarding claim 54, SONY teaches further comprising the step of updating a base station almanac with the location of the repeater (col. 6, lines 19-53).

Regarding claims 55, SONY teaches method for querying the location of a repeater comprising the steps of: sending a query for the location of the repeater; and receiving the location from the repeater (col. 1, lines 7-36, col. 6, line 7 to col. 7, line 17).

Regarding claims 56, 57, SONY teaches wherein the query is sent by a base station (col. 4, lines 20-53).

Regarding claims 58, 59, SONY teaches the query is based on a predetermined time interval (col. 4, lines 19-57).

Regarding claim 60, SONY teaches the query is based on the deployment of a new repeater (col. 7, lines 1-17).